

IN THE CLAIMS:

Please cancel claims 1-35, without prejudice, and add new claims 36-70 as follows.

Claims 1-35. (Cancelled).

36. (New) A method for direct transmission of user data related to a call involving a first terminal device attached to a first access network and a second terminal device attached to a second access network comprising the steps of

- establishing a first transmission path for said user data, said first transmission path comprising

- said first access network

- a first core network communicating with said first access network,

- a second core network communicating with said first core network, and

- said second access network communicating with said second core network,

- switching from said first transmission path to a second transmission path for said user data, said second transmission path comprising a direct connection between said first access network and said second access network, wherein, before said step of establishing said first transmission path for said user data, a step of establishing a third transmission path for control data related to said call is performed, and

wherein, before said step of switching from said first transmission path to said second transmission path for said user data, a handshake between at least one first access-network element involved in said first transmission path in said first access network and at least one second access-network element involved in said first transmission path in

said second access network is performed, said handshake comprising a step of providing from the at least one first access-network element to the at least one second access-network element first control information indicating that said direct transmission of user data between said first and second access networks is possible.

37. (New) A method according to claim 36, wherein said third transmission path comprises the same networks as said first transmission path for user data.

38. (New) A method according to claim 36, wherein said third transmission path remains unchanged before and after said step of switching from said first transmission path to said second transmission path.

39. (New) A method according to claim 36, wherein said first, second, and third transmission paths involve a first access-network element in said first access network, and a second access-network element in said second access-network.

40. (New) A method according to claim 36, wherein said first control information comprises a first information element indicating that in relation to said call said first or second access-network element has the role of an originating or a terminating access-network element, respectively.

41. (New) A method according to claim 36, wherein said step of providing said first control information is performed during said step of establishing a third transmission path for control data related to said call.

42. (New) A method according to claim 36, wherein said step of providing first control information comprises a step of transferring second control information from said first access-network element to said second access-network element, or vice versa, said

second control information containing a transport address of said first or second access-network element, respectively.

43. (New) A method according to claim 42, comprising, before said step of switching from said first transmission path to said second transmission path for said user data, a step of responding to said second control information by transferring third control information from the access-network element receiving said second control information to the access-network sending said second control information, said third control information containing a transport address of the respective access-network element having received said second control information.

44. (New) A method according to claim 36, comprising, after said step of switching from said first transmission path to said second transmission path for said user data, a step of transferring fourth control information from said first access-network element to said first core-network element and/or from said second access-network element to said second core-network element, said fourth control information indicating that said step of switching from said first transmission path to said second transmission path for said user data related to said call has been performed successfully.

45. (New) A method according to claim 44, comprising, after said step of transferring said fourth control information, a step of saving said fourth control information for later use by said first and/or second core-network element, respectively.

46. (New) A method according to claim 44, comprising, after said step of transferring said fourth control information, a step of forwarding said fourth control information from said first and/or second core-network element to further core-network

elements in the first and/or second core-network, respectively, that are involved in said first transmission path.

47. (New) A method according to claim 36, wherein, after said step of switching from said first transmission path to said second transmission path for said user data related to said call, a step of switching back to said first transmission path for user data is performed under predetermined conditions.

48. (New) A method according to claim 47, comprising, before said step of switching back to said first transmission path, a step of transferring fifth control information from said first core-network element and/or said second core-network element to said first access-network element and/or said second access-network element, respectively, said fifth control information indicating a request to switch back the transmission path for user data to said first transmission path.

49. (New) A method according to claim 47, comprising, before said step of switching back from said second transmission path to said first transmission path for said user data, a step of performing a handshake between said first and second access-network elements.

50. (New) A method according to claim 47, comprising, before said step of switching back to said first transmission path, a step of transferring sixth control information from the access-network element receiving said fifth control information to the other access-network element involved in said second transmission path, said sixth control information indicating a request to switch back the transmission path of user data to said first transmission path.

51. (New) A method according to claim 50, comprising, before said step of switching back to said first transmission path, a step of transferring seventh control information from the access-network element receiving said sixth control information to the access-network element sending said sixth control information, said seventh control information indicating acknowledging the coming switch back of the transmission path of user data to said first transmission path.

52. (New) A method according to claim 47, comprising, after said step of switching back to said first transmission path, a step of transferring eighth control information from said first and/or second access-network element to said first and/or second core network element, said eighth control information indicating that said step of switching back to said first transmission path has been performed successfully.

53. (New) A method according to claim 36, comprising, before said step of switching from said first transmission path to said second transmission path for said user data, a step of transferring ninth control information from said first and/or second access-network elements to said first and/or second core-network elements, respectively, said ninth control information indicating that switching to said second transmission path is intended.

54. (New) A method according to claim 53, comprising, before said step of switching from said first transmission path to said second transmission path for said user data, a step of transferring tenth control information from said first or second core-network elements to said first and/or second access-network elements, respectively, said

tenth control information indicating authorization to switch to said second transmission path.

55. (New) A method according to claim 36, wherein said call is of a circuit-switched connection type.

56. (New) A method according to claim 55, wherein said step of establishing said third transmission path for control data comprises a step of negotiating a mechanism of coding and decoding of user data between the networks.

57. (New) A method according to claim 55, wherein said step of transferring said first and/or said second control information from said first access-network element to said second access-network element is performed using said third transmission path.

58. (New) A method according to claim 36, wherein said call is of a packet-switched connection type.

59. (New) A method according to claim 58, wherein said step of transferring said first control information from said first access-network element to said second access-network element is performed using said first transmission path for user data.

60. (New) A method according to claim 59, wherein said first control information is contained in a first data packet transferred between said first and second access-network elements after said step of establishing said first transmission path.

61. (New) A method according to claim 59, wherein said first and/or second control information is contained in at least one extension header of said first data packet, and said second control information comprises said transport address of the access-network element sending said first data packet.

62. (New) A method according to claim 58, wherein said step of transferring said second control information from said first access-network element to said second access-network element comprises a step of forwarding said second control information from said first core-network element to said second core-network element in a second data packet.

63. (New) A method according to claim 58, wherein said step of forwarding said control information from said first core-network element to said second core-network element comprises a step of copying said extension header to said second data packet.

64. (New) A method according to claim 58, wherein said step of responding to said second control information comprises a step of transferring said third control information in a third data packet from the access-network element receiving said second control information to the access-network element sending said second control information.

65. (New) A method according to claim 64, wherein said third control information is contained in at least one extension header of said first data packet, and said third control information comprises said transport address of the access-network element receiving said first data packet.

66. (New) A first network element for controlling the operation of at least one transceiver station in a first access network in relation to a call between a first network terminal attached to said first access network and a second network terminal attached to a second access network, comprising

at least one first interface adapted to exchange control information and user data with said transceiver station,

at least one second interface adapted to exchange control information and user data with a first core-network,

a first call control unit connected to said first interface, and adapted to establish, maintain and release across said first interface in relation to said call a first control-channel section for transmission of control information and a first user-channel section for transmission of user data, said first control- and user-channel sections having as endpoints said network element and said transceiver station,

a second call control unit communicating with said first call control unit and connected to said second interface, adapted to establish, maintain and release across said second interface in relation to said call a second control-channel section for transmission of control information and a second user-channel section for transmission of user data, said second control- and user-channel sections having as endpoints said first network element and a predetermined core-network element in said first core-network,

wherein said first call control unit is additionally adapted to establish, maintain and release across said first interface a third user channel-section for user data related to said call having as endpoints said first network element and a second network element in said second access network, respectively, and

wherein said first network element is adapted to perform a handshake directly between said first network element and said second network element after establishing said second control channel section and before establishing said third user channel

section, said handshake comprising a step of providing from the first network element to the second network element first control information indicating that said direct transmission of user data between said first and second access networks is possible.

67. (New) A network element according to claim 66 that is adapted to releasing said second user-channel section after said third user channel section is established.

68. (New) A network element according to claim 66, that is adapted to assess whether an ongoing call is eligible for establishing said third user channel section.

69. (New) A network element according to claim 66, additionally configured to perform the steps of

- establishing a first transmission path for said user data, said first transmission path comprising

- said first access network

- a first core network communicating with said first access network,

- a second core network communicating with said first core network, and

- said second access network communicating with said second core network,

- switching from said first transmission path to a second transmission path for said user data, said second transmission path comprising a direct connection between said first access network and said second access network, wherein, before said step of establishing said first transmission path for said user data, a step of establishing a third transmission path for control data related to said call is performed, and

wherein, before said step of switching from said first transmission path to said second transmission path for said user data, a handshake between at least one first access-

network element involved in said first transmission path in said first access network and at least one second access-network element involved in said first transmission path in said second access network is performed, said handshake comprising a step of providing from the at least one first access-network element to the at least one second access-network element first control information indicating that said direct transmission of user data between said first and second access networks is possible.

70. (New) Network system comprising a network element according to claim 66.